

# PATENT ABSTRACTS OF JAPAN

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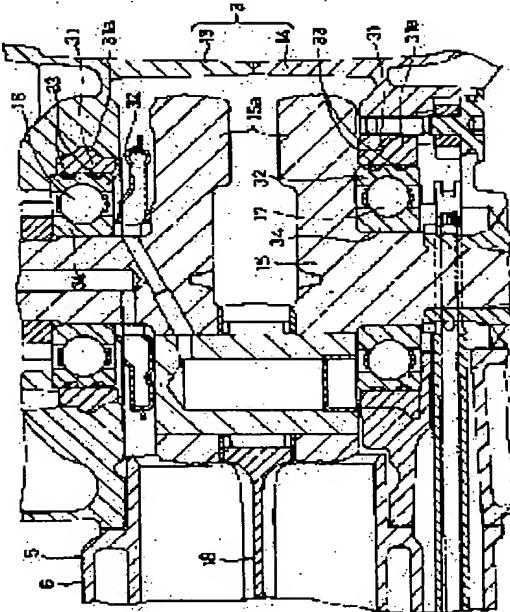
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## (54) ENGINE

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To prevent the wear of a bearing hole holding a crank shaft support bearing by fitting a synthetic resin annular member to an outer peripheral portion of an outer wheel of the crank shaft support bearing, and fitting the annular member with an iron alloy ring-shaped sleeve fixed on a position where a crank case bearing is equipped.

**SOLUTION:** A unit swing type power unit of a scooter type motorcycle is integrally provided with a transmission case in a crank case 3 of an engine. In the crank case 13, a crank shaft 15 is pivotally supported by bearings 16, 17 so as to freely rotate. In this case, a cylindrical sleeve 31 of an iron alloy is provided on a part supporting the crank shaft 15 of the crank case 3, and the bearings (ball bearings) 16, 17 are fitted with a hollow part of the sleeve 31. Two synthetic resin rings 33 as an annular member are equipped on an outer peripheral portion of an outer wheel 32 of each bearing 16, 17, and these rings 33 are fitted with an inner peripheral surface of the sleeve 31, and the crank shaft 15 is fitted in an inner peripheral portion of an inner wheel 34.



## LEGAL STATUS

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